

R E M A R K S

Counsel for applicant wishes to thank Examiner Wozniak for the courtesy of the recent interview. In the interview, counsel for applicant discussed with Examiner the teachings of the present invention as well as that of the cited prior art, namely, Sinclair et al., and Rorabaugh et al. The Examiner noted that "claim amendments directed towards identifying what the fixation symbol is that is displayed may overcome the prior art of record."

Substantively, in the present Office Action, claims 1-5, 7-10, 26-29, 31-33 and 36-38 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sinclair et al. (U.S. Patent 5,589,897) in view of Rorabaugh et al. (U.S. Patent 5,035,500). Claims 6, 11-18, 19-25 and 34-35 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sinclair et al. in view Rorabaugh et al. and further in view of Kasha (U.S. Patent 5,737,060).

In response to Examiner's rejection, applicant has amended claims 1 and 26 to more clearly define applicant's invention over the prior art. Regarding claims 1 and 26, the amendments are directed to identifying what the symbol is that is displayed as the fixation target, as suggested by the Examiner.

Applicant's invention is directed to a method for establishing fixation during computerized visual field perimetry using speech recognition. Specifically, it requires the subject to verbally identify the symbols (alternatively, the direction of movement, or change in symbols) employed as the fixation target as they each appear. Voice recognition techniques are then employed to evaluate the subject's response in identifying the symbol. Upon correctly identifying what symbol is displayed as the fixation symbol, a visual test stimulus is then displayed at a predetermined location within the subject's visual field. Alternatively, the direction of

movement or change in symbols of the fixation target can be identified instead by the subject. Likewise when the subject verbally identifies when the direction changes or the symbol changes, a visual test stimulus is displayed. See claims 11 and 19, respectively.

The independent claims of the present invention, however, have been rejected as being unpatentable over Sinclair et al. in view of Rorabaugh et al. Ostensibly, the Examiner has mistakenly confused the fixation target with the visual stimulus, with regard to verbally identifying.

In contrast to applicant's invention, Sinclair discloses a method for testing a patient having an impaired central field vision. A fixation target 13 is flashed or pulsated on a monitor screen, such as a star, cross or X. Once the eye being tested is fixed upon the fixation target 13, a series of symbols (visual test stimuli) at pseudo-random positions and orientations are displayed to the patient. The symbols are preferably in the form of a "C". The "C" is displayed on the monitor, with the opening in the "C" oriented upwardly, downwardly, facing left or facing right. The patient signals his perception of the orientation of the opening in the "C" utilizing a 4-way toggle switch, joy stick or other multi-axis input device or computer input method such as speech recognition to indicate the orientation.

Ostensibly, the Examiner agrees that Sinclair fails to teach that visual stimulus should be displayed once the subject correctly identifies the symbol that is displayed as the fixation target. As suggested by the Examiner in overcoming the prior art, applicant has amended the claims 1 and 26 to clearly define that the subject must correctly identify what the symbol is that is displayed as the fixation target, before displaying the visual test stimuli.

Applicant's inventively establishes fixation by displaying a fixation target to the subject. When the **fixation symbol** appears, the subject **verbally identifies** the symbol by saying the name of the symbol (alternatively, when the direction or symbol of the fixation target changes). Using speech recognition, the system recognizes the response from the subject, and evaluates whether the symbol displayed as the fixation target was correctly identified by the subject. Upon being correctly identified, the fixation target disappears, and a flashing visual test stimulus is then displayed within the subject's field of view for a preset time. The need to observe the fixation target while verbally identifying the symbol establishes fixation. This is so, since it is unlikely that the subject can correctly identify the fixation symbol if he/she is looking away from the fixation target. Once fixation has been established, the subject's eye is unlikely to wander before the flashing test stimulus is displayed since the identification and visual stimulus display occur in rapid sequence.

Applicant would like to further note that in Sinclair et al. the visual stimuli are displayed while the patient fixes his vision on a stationary fixation target. That the visual stimulus is displayed when the fixation symbol is correctly identified is nowhere remotely shown, taught or suggested. Identifying what symbol is used as the fixation target is **not** relevant in Sinclair et al., but critical to applicant's claimed invention. Nor, is it relevant to Sinclair et al. when the direction or symbol of the fixation target changes. In Sinclair et al., what is verbally done by the subject is saying when the visual test stimulus is present. There is no verbal response to the fixation target.

On the hand, Rorabaugh et al. is directed to visual perimetry wherein the fixation target moves instead of the visual test

stimulus. Applicant agrees that Rorabaugh et al. discloses the desirability of voice recognition in responding to the visual test stimuli. However, that mere fact does not anticipate or suggest applicant's claimed invention. The Examiner has mistakenly read Rorabaugh et al. In Rorabaugh et al., as in Sinclair et al., the subject responds verbally to the visual stimuli NOT the fixation target. ~~¶~~ There is no verbal identification of what symbol is displayed as the fixation target. Nor, does the subject respond verbally to when the fixation target changes direction or changes symbol, before displaying the visual stimuli.

Inasmuch as Rorabaugh et al. advocates establishing fixation by staring at a moving fixation target, there is simply no motivation to use speech recognition to effect any other means of fixation, as taught and claimed by applicant. Again, identifying the symbol used as the fixation target is not relevant. In Rorabaugh et al., the visual test stimuli are displayed independent of the subject identifying a characteristic of the fixation target.

Furthermore, Kasha does not remedy the deficiencies of the Sinclair et al. or Rorabaugh et al. Kasha discloses a moving and changing fixation point. As the fixation point moves it changes from one shape to another, e.g. from a square to a circle. The subject is then required to press a mouse button when the fixation point changes. Failure to miss a change in fixation point would signal a loss of fixation. Again, there is no verbal identification with respect to the fixation target. ) ~~\$~~

In view of the remarks above, applicant believes independent claims 1, 11, 19, 26 to be allowable. Since independent claims 1, 11, 19, and 26 are allowable, it is believed that the dependent claims therefrom are also allowable, namely, claims 2-10, 12-18, 20-25 and 27-29, and 31-36.

Since this application is believed to be in condition for allowance, reconsideration and allowance are respectfully solicited.

Respectfully Submitted,  
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